TTM-J4/J5 SERIES USER'S MANUAL DIGITAL TEMPERATURE CONTROLLER

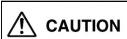
Thank you for purchasing model **TTM-J4/J5 SERIES** Digital Temperature Controller. Please go through this Instruction Manual carefully and use the unit in proper manner.

NOTICE/WARNING BEFORE OPERATION USE

- ●When having the purchased controller at hand, please be sure that its unit is a correct model (See the following "Model Configuration").
- ●The following symbol marks ⚠ provide to prevent incident or damage. Kindly refer to the details of the WARNING/CAUTION when using for the first time



Due to mishandling, serious dangers may occur to the operator such as death, electrocution and a skin burn.



Owing to mishandling, it may cause some damage to the unit or the operator getting slight injury.

- Please put this user's manual aside for your reference, when operating the unit.
- · Copy or reprint of this manual, wholly or partially, is not allowed.
- · The contents of this manual may change without notice in future.

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CAUTION

- For prevention of its malfunction, do not push the front key with sharp points.
- Spare terminal must not be used for other purposes.



●TTM-J4

WARNING

- Make sure the correct wiring connection before turning on electricity.
- Mis-wiring may cause malfunction of the unit and fire.
- Never modify the unit to prevent damage or incident such as malfunction and fire etc.

PARTS INDICATION

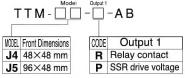




PV	Process value, charactor for setting mode display.
SV	Settiug value, input value for setting mode display.
OUT1	Lights ON when output 1 turn ON
OUT2	Lights ON when output 2 turn ON
AL1	Lights ON when Event output 1 turn ON
AL2	Lights ON when Event output 2 turn ON
RDY	Lights ON under Ready
MODE KEY	For change of display
FUNC KEY	For action of function setting
▲▼ KEY	Up down key for change of setting value. Holding the up down keys are the value at a rapid rate.

ACCESSORY & CONFIGURATION

- Please be sure that the unit enclosed in packing carton is a right model before using.
- 2) Kindly check the following accessory being contained in that carton box.
 - Installation Attachment
 - This user's manual: 1 copy
- 3) Model Configuration

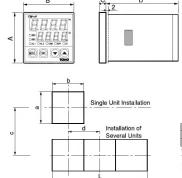


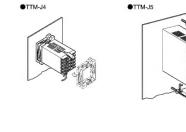
- * "A" (EV1:Alarm1) and "B" (EV2:Alarm2 or OUT2:Relay contact) equipped as standard specifications.
- * Output 2 is equally used as EV2, but both not activated simultaneously.

INSTALLATION AND WIRING

Unit: mm

Outer Dimensions and Panel Cutout



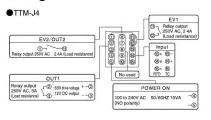


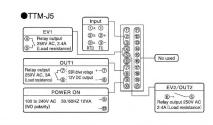
Model	a	b	С	d	Α	В	C	D	L
TTM-J4	45 +0.6	45 +0.8	60	48	48	48	6	77	(B(d)×N-3)+0.6
TTM-J5	92 +0.6	45 +0.6	120	48	96	48	6.5	76.5	(B(d)×N-3) ±10
"L" is for insta	allation of	multiple	units.						

SPECIFICATIONS

Power Supply Voltage	100 to 240V AC, 50/60Hz
Power Consumption	Below 10 VA
Memory Element	EEPROM
Input of Sensor	Thermocouple, R.T.D. (Changeable by front key)
Control Output	Relay contact, SSR drive voltage
Control Method	Two kinds of PID, ON/OFF
Operation Environment	0 to 50°C, 20 to 90%RH (Avoid making dew)
Storage Environment	-25 to 70°C, 5 to 95%RH (Avoid making dew)
Weight	TTM-J4 Less than 180g, TTM-J5 Less than 300g.
Location of the Unit Setting CAUTION	Keep away from the followings. Gas of corrosion, dust and oily smoke. The electric noise of generator. The influence of electromagnetic field. Mechanical vibration and shock. The direct sunlight.
Installation condition	Installation category II

Wiring







For prevention of electric shock, please do wiring connection only after turning power off and don't touch the terminal part under power on.

CAUTION BEFORE CONTROL

- Setting program is stored after power OFF, as non-volatile memory is equipped with TTM-J4/J5 SERIES controllers for setting storage.
- Either thermocouple or R.T.D.(Pt 100/JPt 100) is selectable input type.
 For suitable application, please select most appropriate input type and adjust input setup.
- PID or ON/OFF control is selective for the optimal performance and each detail of features is specified in the table on the right side.

	PID Control	ON/OFF Control
Merit	Better control result is achieved as opposed to that of ON/OFF control.	Life span of relay is generally longer, as it is ON when temperature is below SV and it is OFF when temperature is over SV (For heating control).
Demerit	Life span of relay is shorter, as output exists frequently with relay contact.	Control value is worse in comparison with that of PID control.

※ PID constants are automatically reckoned up to write in, when control begins or SV is altered on self-tuning.



